# EFFECT OF ZEOLITE APPLICATION ON REDUCING NITROGEN (N), PHOSPHORUS (P), POTASSIUM (K) AND MAGNESIUM (Mg) LEACHING FROM MINERAL SOIL

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**Final Year Project Report Submitted In Partial Fulfillment of Requirement for the Degree of Bachelor of Sciences (Hons.) Plantation Technology and Management in the Faculty of Plantation and Agrotechnology Universiti Teknologi MARA**

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## DECLARATION

This Final Year Project is a partial fulfillment of the requirement for a degree of Bachelor of Science (Hons.) Plantation Technology and Management, Faculty of Plantation and Agrotechnology, Universiti Teknologi MARA.

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I hereby declare that I have checked this project and in any my opinion, this project is adequate in terms of scope and quality for the award of the degree of a Bachelor of Science (Hons,) Plantation Technology and Management, Faculty of Plantation and Agrotechnology, Universiti Teknologi MARA.

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Position: Assistant Rector Date: 25/7/16

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## ABSTRACT

Zeolite can enhance the soil fertility by reducing nutrient losses through leaching. The main objective of this study is to determine the optimum amount of zeolite required for reducing leaching losses of soil nutrient. The soil column leaching method was used with mineral soil obtained from the UiTM oil palm smallholding in Jasin, Melaka. The treatment consists of four zeolite application rates, i.e. 0, 0.5, 1.0 and 1.5 gram per column. Result shows that application of zeolite significantly reduces leaching losses of nitrogen (N) at 1.5 g/column and phosphorus (P) at 0.5 g/column. However, the zeolite treatments did not significantly reduce leaching losses of potassium (K) and magnesium (Mg) from the soil columns.